



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/566,852

02/22/2006

Hiromi Yoshida

JFE-05-1840

9915

35811 7590 03/11/2009
IP GROUP OF DLA PIPER US LLP
ONE LIBERTY PLACE
1650 MARKET ST, SUITE 4900
PHILADELPHIA, PA 19103

EXAMINER

YEE, DEBORAH

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

03/11/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,852	Applicant(s) YOSHIDA ET AL.	
	Examiner Deborah Yee	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 30, 2009 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11 to 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 2002-26941 ("JP-941").

4. JP-941 teaches high strength steel sheet examples in tables 1 and 2 having a composition and microstructure which meet the recited claims; and when calculated, satisfy the claimed Nb and Ti equation; and are processed in the same manner as recited by the method claims.

5. Even though a grain size of 8 μm or less as recited by the claims is not disclosed by JP-941, such would be expected since composition, microstructure and process of making are closely met, and in absence of proof to the contrary.

Art Unit: 1793

6. Even though JP-941 teaches 0.01 to 0.5% V whereas Applicant's claims recite "free of V", such would not be a patentable distinction because it would be obvious for one skilled in the art to omit vanadium and its known function (drawability), when the known function of vanadium (drawability) is not desired or needed. Note that JP-041 in paragraph [0031] teaches Nb and Ti have the same function as V to improve drawability, but Nb and Ti alone without V do not fully improve deep drawability. This teaching appears to replicate Applicant's invention, wherein V is omitted from steel to produce no more than the known and expected effect which is lower drawability. Note Applicant's claims recite an average r value as low as 1.2 which is much lower than the r-value range of 1.7 to 1.9 shown by JP-941 examples in table 2.

7. Moreover, it has been held that a known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use, see *In re Gurley* 27F.3d at 553, 31USPQ2d at 1132.

8. To distinguish claims over prior art, it is recommended that Applicant amend claims to recite an r-value of at least 1.8 and elongation of at less 30%. The support for amendment is shown base on examples shown in tables 2-1 and 2-2 of the instant specification. Note that the omission of vanadium with retention of vanadium's function would be indicia of unobviousness.

Response to Arguments

9. Applicant's arguments filed January 30, 2009 have been fully considered but they are not persuasive.

Art Unit: 1793

10. Applicant argued that inventive steels containing Nb and Ti are not inferior to JP-941 steels containing V with regard to the r-value. This is evident base on JP-941 steel G in table 1 containing 0.045% V with no Nb and Ti and $(V/51)/(C/12) = 0.33$ to obtain r-value of 0.8. In comparison, inventive steels J, K, and L in Table 1 contain 0.075 to 0.082% Nb and 0.025 to 0.028% Ti with no V and $(Nb/93)/(C/12) = 0.26$ to 0.29 to obtain r-value of 1.3-1.4. The steel examples indicate that the conclusion in examiner's rejection, namely, V has an effect of improving the r value rather than Nb and Ti, can not be logical. In JP-941, the r- value is increased by the addition of V wherein a large mount of V is added in proportion to C equivalent as seen in steels A, H and L. However, with a small V addition as with the small additions of Nb and Ti in Applicant's steels, r- value is considered to be low.

11. The fact that r-value of 1.2 or more is secured by adding a small amount of Nb Applicant believes originate due to the effect of "fining of ferrite grain size of a hot-rolled sheet." As is apparent from the submitted diagram which shows some of the Applicant's examples, the foregoing fact can be achieved only with the addition of 0.01%Nb or more. In this instance, as a condition of hot rolling, a FDT of 800°C or more and a CT of 400 to 720°C becomes necessary.

12. In sharp contract, JP-941 specifies a FDT of 700°C or more from the non-uniformity of the base sheet structure and a rolling load CT of 800°C or less in view of scale loss such that the fining of ferrite grains size of a hot-rolled sheet is not secured and obtainment of a high r value is impossible.

Art Unit: 1793

13. In response to argument, it is the examiner's position that prior art steel G containing 0.045% V would not be a valid comparison with inventive steels J, K, and L containing 0.075 to 0.082% Nb and 0.025 to 0.028% Ti because the V content is significantly lower than Nb and Ti content. Hence applicant's conclusion that inventive steel can secure r- value of 1.2 with small amounts of Nb and Ti whereas prior art steel can not secure r value of 1.2 with small amounts of V is not accurate. To support conclusion, Applicant will need to provide test data with steels containing V and steels containing Nb and Ti, such that V and Nb and Ti are in substantially the same amount.

14. With regard to refining grain size to 8 μm or less, such property would be expected by prior art since composition and process limitations are met. See prior art examples in table 1 containing Nb within the claimed range of 0.01 to 0.3% Nb and are processed according to paragraph [0053] by heating to 1150°C, hot rolling with finish temperature, FDT at 900°C followed with coiling CT at 650°C which meet Applicant's process limitations.

15. For the foregoing reasons, claims would not patentably distinguish over prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/
Primary Examiner
Art Unit 1793

/DY/